WSDA
WASHINGTON STATE
DEPARTMENT OF AGRICULTURE

Gypsy Moth Facts

December 2001

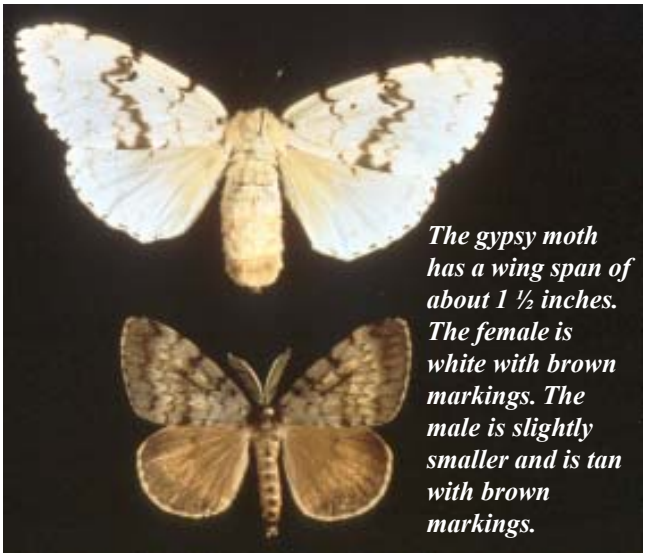
P.O. Box 42560, Olympia, Washington 98504-2560

What is a gypsy moth and why is it a threat to Washington?

The gypsy moth is one of America's worst forest pest insects. It feeds on the foliage of more than 500 different species of trees and shrubs and causes enormous damage to the environment and to the economy.

Economic losses caused by the gypsy moth have averaged $30 million a year for the last 20 years, according to U.S. Department of Agriculture estimates. Most of the loss is due to quarantines imposed on timber and agricultural products.

Due to its voracious appetite and ability to reproduce, the gypsy moth causes incredible damage to forests, nurseries, vegetation along creeks and rivers, and trees and shrubs in yards and parks. It alters wildlife habitat and affects the quality of life in communities that experience repeated outbreaks.



The gypsy moth has a wing span of about 1 ½ inches. The female is white with brown markings. The male is slightly smaller and is tan with brown markings.

Major infestations are cyclical. When disease and other factors bring an outbreak to an end, the gypsy moth population remains small for four to six years and then begins to build again. A ten-state area in the Northeast is currently experiencing a tremendous increase. Between 1997 and 2001, the number of defoliated acres in these states rose from 50,000 acres to 1.6 million acres.

The gypsy moth has no native enemies in this country. If allowed to become established in Washington, this insect could pose devastating impacts on agricultural, timber and urban areas.

When the leaves are all eaten, gypsy moth caterpillars will search anywhere for food – even the eaves of a house.

Are all gypsy moths the same?

No. The European variety was brought to the U.S. from Europe over 100 years ago. It got loose by accident and quickly established residency in Massachusetts. It has proved extremely resistant to eradication efforts. Although it has been the subject of more eradication and control strategies than any forest insect in U.S. history, it has spread to 18 states and the District of Columbia.

The Asian variety was first found in this country in 1991 coming in on a ship visiting the Port of Tacoma. It is a much greater threat to Washington state than the European variety because it eats evergreen as well as deciduous trees, and its female can fly. This means that Asian infestations can spread much more quickly and further, and they are much more difficult to pinpoint. To date, the Asian gypsy moth has not become established in this country.

What kind of damage does the gypsy moth do?

It devours the leaves of more than 500 species of trees and shrubs. Its favorites include oak, birch, apple, poplar, alder, cottonwood, hawthorn and willow. The Asian variety also favors evergreens.

Trees repeatedly defoliated either die or become so weak that they are susceptible to disease and other pests. This results in a loss of wildlife habitat; and significant degradation of water quality in streams as a result of increased temperature, siltation, and large mounts of caterpillar droppings being deposited in the water.

Washington's successful gypsy moth program

The Department of Agriculture conducts an annual survey to locate new introductions of gypsy moth and determine if a reproducing population of the pest exists. Every summer, about 21,000 cardboard gypsy moth traps are placed throughout the state. Most traps are placed in Western Washington where commerce and people moving or traveling to our state from the East Coast increase the risk of introduction.

Male moths are attracted to the traps by a female scent lure. Traps are checked every two weeks. If moths are caught, more traps are placed in the area to pinpoint the center of the infestation. The gypsy moth was first detected in Washington in 1974. Introductions have occurred nearly every year since then. Department of Agriculture has eradicated them through:

- An aggressive summer trapping program to find new introductions of gypsy moth;
- Treatment programs to eliminate infestations in the spring before they spread; and
- Cooperation among local municipalities, the public, U.S. Department of Agriculture, and other agencies regarding summer trapping and spring eradication programs.

What is the difference between eradication and suppression?

Eradication means getting rid of the pest while suppression means controlling its population. Once an infestation becomes established, eradication is too costly. Therefore, states with permanent infestations can only supress the gypsy moth. Washington and the rest of the western states eradicate infestations whenever they are found. Any approach other than eradication means that a state will become permanently infested.

What control measures might be used?

Control measures are needed when a reproducing population of the gypsy moth is found. This year, eradication efforts are being planned in two locations, the Vader area of Lewis County and the Crown Hill area of Seattle. Treatment options being considered include:

- Gypchek: A virus that affects only gypsy moth caterpillars. The caterpillar must eat Gypchek for it to have an effect.
- *Bacillus thuringiensis* var. *kurstaki* (*Btk*): A bacterium that affects only caterpillars, including gypsy moth. The caterpillar must eat *Btk* for it to have an effect.
- Diflubenzuron: A chemical that disrupts the growth of caterpillars.

The U.S. Environmental Protection Agency registers all three pesticides for use in this country. Diflubenzuron and *Btk* have been used successfully for gypsy moth control in Washington.

How will a control measure be selected?

If a decision is made to treat an area, a method or a combination of methods will be selected based on potential effects to human health, environmental considerations, and the effectiveness of the product.

The U.S. Department of Agriculture prepared an updated final environmental impact statement on national gypsy moth management in 1995. It presents a range of alternatives for controlling the pest in this country, and discusses the potential impacts of using various control measures. Copies are available at Vader City Hall and the Ballard Library.

The state Department of Agriculture will prepare documents required under state and national environmental policy acts. These documents will be available for public review and comment. Comments concerning the documents will be reviewed before a decision is made whether to proceed with treatment.

Where can I get more information?

Community outreach programs will be conducted in Vader and Crown Hill to make residents aware of the gypsy moth threat, options available to eradicate it, and how the eradication effort may effect them. For information, call (800) 443-6684, or visit the Department of Agriculture's Web site at www.wa.gov/agr and click on "Gypsy Moth."

Since the '70s, Washington state has successfully detected and eradicated more than 150 infestations and kept gypsy moth from becoming established here.

The department cooperates with neighboring states and Canadian provinces to make sure Washington doesn't end up like the Eastern states and several provinces that are permanently infested with gypsy moth.

Statewide trapping results

2001 – 33 total
14 King County
10 Lewis County
2 Island County
2 Snohomish County
1 Kitsap County
1 Pierce County
1 Skagit County
1 Thurston County
1 Whatcom County

2000 – 92 total
7 King County
71 Lewis County
5 Cowlitz County
5 Snohomish County
2 Kitsap County
1 Pierce County
1 Whatcom County

1999 – 42 total
13 King County
21 Snohomish County
3 Kitsap County
2 Pierce County
2 Thurston County
1 Okanogan County